

ABSTRACT

The present invention relates to novel methods for detecting or quantifying nucleic acid analytes through their interactions with a nucleic acid probe or a pair of nucleic acid probes, wherein the probe or the pair of probes is comprised of at least one monomeric LNA moiety and two or more dyes, wherein at least one of said dyes is fluorescent. Preferably the probe or the pair of probes is comprised of a combination of two dyes, wherein either both are fluorescent dyes that coactively function as the donor dye and the acceptor dye of a FRET system, or wherein one of said dyes is a fluorescent dye and the other is a corresponding non-fluorescent quencher dye. Included in the present invention are novel nucleic acid probes for use in the detection and quantification of analytes according to the methods of this invention. The novel nucleic acid probes of the invention are comprised of an n-meric nucleic acid comprising any number of 1 to n monomeric locked nucleic acid (LNA) moieties that may be located in any position(s) of the nucleic acid sequence. The nucleic acid probes are further characterized in that they are derivatized with one or more dyes, wherein said dyes are independently selected from fluorescent dyes or non-fluorescent quencher dyes. The methods provided by the invention are based on the change of fluorescence resulting from the hybridization of the inventive nucleic acid probes or pairs of nucleic acid probes with nucleic acid analytes.